

2. (Amended) The silica microstructure fabrication method of claim 1, wherein the etch stop layer deposition step comprises the steps of:

depositing a photoresist layer on the first silica layer;

patterned the photoresist layer according to the shape of the etching area;

forming the etch stop layer using the surfaces of the photoresist layer and the first silica layer; and

removing the photoresist layer using a photoresist remover.

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9. (Amended) The silica microstructure fabrication method of Claim 7, wherein the second silica layer is dry-etched according to a predetermined vertical profile.

10. (Amended) A silica microstructure which is produced by the steps of:

depositing an etch stop layer on an etching area of a portion of a first silica layer formed on a semiconductor substrate;

forming a second silica layer on the surfaces of the etch stop layer and the first silica layer;

forming a mask patterned according to the shape of the etching area on the surface of the second silica layer;

removing the second silica layer from the etching area using the mask by dry etching; and

removing the etch stop layer by wet etching.

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*03*

11. (Amended) A silica microstructure according Claim 10, wherein the etch stop layer deposition step comprises the steps of:

depositing a photoresist layer on the first silica layer;

patterning the photoresist layer according to the shape of the etching area;

forming the etch stop layer on the surfaces of the photoresist layer and the first silica layer; and

removing the photoresist layer using a photoresist remover.

12. (Amended) A silica microstructure according Claim 10, wherein the etch stop layer deposition step comprises the steps of:

forming the etch stop layer on the first silica layer;

forming a photoresist layer on the etch stop layer;

patterning the photoresist layer according to the shape of the etching area; and

dry-etching the etch stop layer using the photoresist pattern.

13. (Amended) A silica microstructure according Claim 10, wherein the etch stop layer is formed of one of metal and ceramic.

14. (Amended) A silica microstructure according Claim 10, wherein the mask formation step comprises the steps of:

forming a metal layer on the second silica layer by sputtering;

forming a photoresist layer on the metal layer;

patterning the photoresist layer according to the shape of the etching area; and

etching the metal layer using the photoresist pattern.

15. (Amended) A silica microstructure according to Claim 10, wherein the first and second silica layers are formed by deposition.

16. (Amended) A silica microstructure according to Claim 10, wherein the second silica layer is dry-etched by RIE (Reactive Ion Etching).

17. (Amended) A silica microstructure according to Claim 10, wherein the second silica layer is removed according to a predetermined vertical profile.

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18. (Amended) A silica microstructure according to the process recited in Claim 16, wherein the second silica layer is dry-etched by RIE according to a predetermined vertical profile.

19. (Amended) A silica microstructure according to Claim 16, wherein said microstructure comprises a planar light wave circuit (PLC).

20. (Amended) A silica microstructure according to Claim 17, wherein said microstructure comprises one of a planar lightwave circuit and a microelectromechanical (MEMS) device.

**IN THE CLAIMS**

Please cancel claims 8 and 18 without prejudice and amend the claims as follows:

1. (Amended) A silica microstructure fabrication method comprising the steps of:
  1. partially depositing an etch stop layer on an etching area of a portion of a first silica layer formed on a semiconductor substrate;
  2. forming a second silica layer on the surfaces of the etch stop layer and the first silica layer;
  3. forming a mask patterned according to the shape of the etching area on the surface of the second silica layer;
  4. removing the second silica layer from the etching area using the mask by dry etching; and
  5. removing the etch stop layer by wet etching.
2. (Amended) The silica microstructure fabrication method of claim 1, wherein the etch stop layer deposition step comprises the steps of:
  1. depositing a photoresist layer on the first silica layer;
  2. patterning the photoresist layer according to the shape of the etching area;
  3. forming the etch stop layer ~~on~~using the surfaces of the photoresist layer and the first silica layer; and
  4. removing the photoresist layer using a photoresist remover.
9. (Amended) The silica microstructure fabrication method of Claim 7, wherein the second silica layer is ~~removed~~ dry-etched according to a predetermined vertical profile.

10. (Amended) A silica microstructure according to the process recited in Claim 1, which is produced by the steps of:

depositing an etch stop layer on an etching area of a portion of a first silica layer formed on a semiconductor substrate;

forming a second silica layer on the surfaces of the etch stop layer and the first silica layer;

forming a mask patterned according to the shape of the etching area on the surface of the second silica layer;

removing the second silica layer from the etching area using the mask by dry etching; and

removing the etch stop layer by wet etching.

11. (Amended) A silica microstructure according to the process recited in Claim 10, wherein the etch stop layer deposition step comprises the steps of:

depositing a photoresist layer on the first silica layer;

patternning the photoresist layer according to the shape of the etching area;

forming the etch stop layer on the surfaces of the photoresist layer and the first silica layer; and

removing the photoresist layer using a photoresist remover. 2.

12. (Amended) A silica microstructure according to the process recited in Claim 103,

wherein the etch stop layer deposition step comprises the steps of:

forming the etch stop layer on the first silica layer;  
forming a photoresist layer on the etch stop layer;  
 patterning the photoresist layer according to the shape of the etching area; and  
dry-etching the etch stop layer using the photoresist pattern.

13. (Amended) A silica microstructure according to the process recited in Claim 104,  
wherein the etch stop layer is formed of one of metal and ceramic.

14. (Amended) A silica microstructure according to the process recited in Claim 105,  
wherein the mask formation step comprises the steps of:  
forming a metal layer on the second silica layer by sputtering;  
forming a photoresist layer on the metal layer;  
 patterning the photoresist layer according to the shape of the etching area; and  
etching the metal layer using the photoresist pattern.

15. (Amended) A silica microstructure according to the process recited in Claim 10,  
wherein the first and second silica layers are formed by deposition.

16. (Amended) A silica microstructure according to the process recited in Claim 10,  
wherein the second silica layer is dry-etched by RIE (Reactive Ion Etching).7.

17. (Amended) A silica microstructure according to the process recited in Claim 810,  
wherein the second silica layer is removed according to a predetermined vertical profile.

18. (Amended) A silica microstructure according to the process recited in Claim 916,  
wherein the second silica layer is dry-etched by RIE according to a predetermined vertical  
profile.

19. (Amended) A silica microstructure according to the process recited in Claim 167,  
wherein said microstructure comprises a planar light wave circuit (PLC).

20. (Amended) A silica microstructure according to the process recited in Claim 178,  
wherein said microstructure comprises one of a planar lightwave circuit and a micro-  
electromechanical (MEMS) device.